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Work-Related Injuries to Teens

Newsletter from the *Teens at Work: Injury Surveillance and Prevention Project* Spring 1998

National News

Why Focus on the Health and Safety of Young Workers?

Work is an integral part of teen life in the U.S. Millions of teens less than 18-years-old work. According to the Bureau of Labor Statistics for 1996, on average, 35% of 16 and 17-year-olds are working at any given point in time and more are looking for work. Eighty percent have had a job by the time they have graduated from high school.

While work can have important benefits, it can also be hazardous. Tens of thousands of teens are injured and 70 are killed on the job each year in this country. A study conducted by the Massachusetts Department of Public Health found that between 1987 and 1990, more than 700 teens filed workers' compensation claims for lost work-time injuries per year. Taking into account that most teens are working part-time, it appears that teens have a higher rate of occupational injury per hour worked than adults. (References on p. 3.)

While workers of all ages face hazards on the job, a number of factors raise special concerns about young workers.

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Massachusetts Surveillance

Summary Data from the *Teens at Work: Injury Surveillance and Prevention Project*

The Massachusetts Department of Public Health's *Teens at Work: Injury Surveillance and Prevention Project* collects data on work-related injuries to teens under age 18. Since 1992, Massachusetts public health code has mandated that physicians and hospitals report cases of work-related injuries to teens to the Department of Public Health (MDPH). Workers' Compensation records are also used to identify cases of work-related injuries to teens. Below are key findings from the first four years of data collection. These findings are used to guide prevention efforts across the state.

From July 1993 - June 1997, MDPH identified more than 2200 cases of work-related injuries to teens. Since Massachusetts workers' compensation cases are limited to injured workers with five or more lost workdays and only a sample of hospital emergency departments and physicians regularly report, this figure underestimates the full extent of the problem. Nonetheless, the data tell us some interesting facts about injuries to teens on the job in our state.

Although male and female teens are represented in the workforce in equal numbers, injuries among males outnumber those among females almost 2:1. The occurrence of injuries increases with age, with the vast majority of injuries to 17-year-olds (Figure 1). More than half of all injuries are to teens working in just five industries (Figure 2).

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Figure 1. **Number of Injuries by Age and Gender**
Based on workers' compensation data 6/93-7/97

Occupational Health Surveillance Program, Massachusetts Department of Public Health
250 Washington Street, 6th Floor • Boston, MA 02108 • (617) 624-5638, fax: (617) 624-5695

Stories from Injured Teens

I'm 5'3". The pans I needed to cover the dough were stacked to the ceiling so I stood on a large dough mixer in order to reach them. As I was getting down, I twisted my leg, fell, and fractured my right leg and my knee cap. I had asked for a step stool a number of times.

17-year-old restaurant worker

A co-worker and I were transferring a patient from the commode to a wheelchair. I thought the patient was going to fall so I turned to get more leverage. I felt a sharp pain in my back. I continued to work 5 more hours to finish my shift. I went to the hospital the next day because my back hurt and I had lost feeling in my left leg.

16-year-old nursing home nurse's aide

I was pumping gas the 3-10 PM shift. It was about zero degrees out and the wind was blowing. Around 5:00, I began to feel some numbness in my fingers and toes: I told my boss about it twice. I worked the rest of the shift and then went home. I woke up in the middle of the night and couldn't feel my fingers or toes. I went to the emergency room the next morning. I had second and third degree frostbite on all my fingers and three of my toes.

15-year-old gas station attendant

I was in the backroom storage area using the safety razor to clean off stickers from the pricing gun. I looked away for a second, the razor slipped and I cut my knuckles. I went to the hospital and had to get stitches.

16-year-old supermarket clerk

Massachusetts Findings

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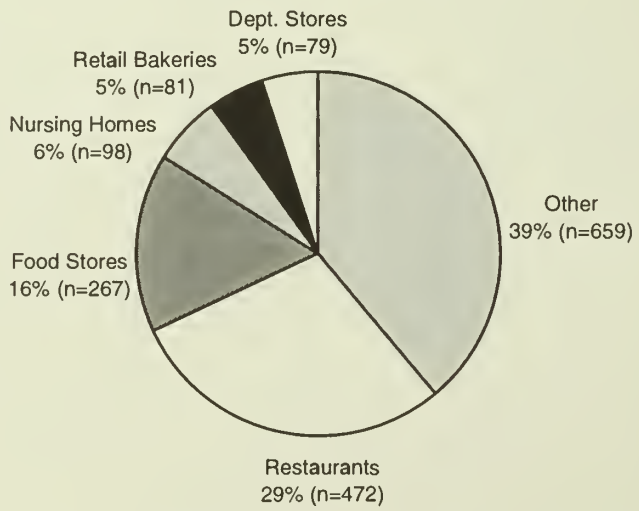
Restaurants lead all other industries accounting for 29% of all teen workers' compensation cases. The highest rate of injuries among 16- and 17-year-olds is found in the trucking and courier services industry, followed by personnel agencies, retail bakeries, nursing homes, and restaurants. Both numbers and rates must be considered when developing prevention strategies.

The most common injuries seen in workers' compensation cases are: sprains and strains; cuts, lacerations and punctures; contusions and abrasions; and burns. More than 50% of all sprains and strains (in all industries) are sprains and strains to the back. The potential long-range implications of back injuries to the future health of teens is of particular concern.

Hospital emergency department data differ from workers' compensation cases with respect to the types of injuries reported. According to emergency department reports, cuts, lacerations, and punctures were the most common injuries, followed by contusions and abrasions, and burns. Furthermore, only 3% of all cases of teen injuries were reported by more than one data source. These findings underscore the need for multiple information sources in order to accurately describe the nature and extent of injuries to teens on the job. (Note: Although this discussion has been confined to emergency department and workers' compensation cases, the Massachusetts Burn Registry, the Hospital Discharge Data Set, and the Census for Fatal Occupational Injuries are also utilized to identify a limited number of work-related injuries to teens.)

From these summary data coupled with detailed information provided by teens during follow-up telephone interviews, we are learning more about how injuries occur to teens in the workplace. These data are essential to the development of effective prevention measures.

Figure 2. **Distribution of Industries with the Greatest Number of Injuries**
Based on workers' compensation data 6/93-7/97



National News

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- Teens are often employed in industries with higher than average injury rates for workers of all ages.
- Teens do not receive adequate health and safety training, either on the job or at school. On-the-job supervision is often limited.
- Teens go to their jobs often after putting in a "full day of work" at school which contributes to fatigue -- potentially increasing the risk of injury and interfering with school.
- As new workers, teens are unfamiliar with workplace hazards and often unaware of their legal rights as workers. They may be reluctant to ask questions or speak up about problems. Many teens report feeling dispensable and believe they will be replaced if they speak up.
- Adolescent physical developmental is extremely variable. Smaller teens may be unable to manipulate machine parts or lack the strength to do certain tasks. Larger teens may be assigned tasks simply because of their size without regard to their experience or capabilities.
- Teen years are a time of exploration, asserting independence, and taking risks. Because of this, it is sometimes assumed that teens are injured because they've acted irresponsibly or carelessly. It is often just the opposite however. It is teens trying to be more responsible, trying to "do just a little more" who are at risk.
- Child labor laws provide some safeguards for working teens; however, many of the laws are outdated and government resources to enforce them are limited. Employers and teens are not well-informed about the laws. Parents, school personnel, and medical providers who sign-off on work permits likewise lack information necessary to provide meaningful guidance about what is safe and appropriate work.

Providing safe, healthful, and positive work experiences for today's teens requires a joint effort of many parties, including employers, parents, educators, health care providers, government agencies, and teens themselves. See page 5 for a list of things you can do to help prevent injuries to teens at work.

What Injured Teens Are Telling Us

Since the inception of *Teens at Work*, more than 300 teens have participated in telephone interviews regarding their work-related experiences and injuries. An analysis was conducted of 301 interviews completed over three years from July 1, 1994 through June 30, 1997.

On Health and Safety Training

50% had received no health or safety training from their employers.

On Why Teens Work

- 78% worked for spending money
- 59% worked to buy or support a car
- 38% were saving for further education
- 28% were saving for something other than a car or school
- 26% worked to support themselves
- 20% worked to learn a skill or career
- 19% contributed to their parent's or guardian's household expenses
- 14% other reasons (e.g., to keep busy, learn responsibility)

(Note: Exceeds 100% as teens could provide multiple responses to question.)

On the Impact of Injuries

Thirty-one (31) days was the average number of days teens missed or cut down on usual activities such as work, school, extra-curricular, household, and recreational activities.

On Injury Prevention

74% thought their injuries were preventable

References

Miller, M (1995): Occupational Injuries Among Adolescents in Washington State, 1988-1991: A review of Workers' Compensation Data. Washington State Department of Labor and Industries, Technical Report No. 35-1-1995.

CDC (Centers for Disease Control) (1983): Surveillance of occupational injuries treated in hospital emergency departments. MMWR 32 (2ss): 31ss-37ss.

Community Intervention

A Community-Based Approach to Young Worker Health and Safety

Since October 1995, the Greater Brockton *Protecting Young Workers Project* has been actively promoting young worker health and safety at the community-level. One of only three such community-based projects in the country funded by NIOSH, *Protecting Young Workers* utilizes the area's renown School-to-Career system and its intricate network of community resources in order to accomplish its goals of raising awareness about occupational health and safety issues relevant to young workers. Coordinated by MDPH, a 33-member advisory board includes representatives from education, labor, business, youth, government, and a variety of other interests. The Board meets regularly to plan and implement project activities. In its third and final year of funding, the Board is planning ways to continue project activities even beyond NIOSH funding.

Examples of Project Activities

- Brockton High School teachers developed and are teaching occupational health and safety curricula related to young workers in a variety of high school subjects.
- Teen peer leaders wrote and produced a Public Service Announcement about workplace rights for young workers which is aired locally.
- Teen peer leaders conduct health and safety trainings in out-of-school settings.
- Educational materials were distributed to households of all Brockton High School students.
- A health and safety module was developed for and is now integrated into the School-to-Career Mentor Training Program.
- The mayor declared July 1997 "Protecting Young Workers Month."
- Supervisors and employees of five large Brockton restaurants are participating in health and safety training.
- "Best Practices" awards will be issued to employers and other community members demonstrating exceptional efforts in protecting young workers.

For more information about the project, call project director Robin Dewey at 617-624-5625.

Student Survey Results

As part of the *Protecting Young Workers Project,* 450 Brockton high school students were surveyed regarding their work history and practices. Three hundred teens responded that they were either working at the time of the survey or had previously had a job. While the experiences of teens in various communities may differ, results of the Brockton survey offer insights into the experiences of these working teens. A few of the most interesting findings are listed in next column.

Most working teens worked four or more days per week:

- 85% working in fast-food restaurants or grocery stores, and nearly 75% working in other stores work four or more days per week

Some teens work later at night than child labor laws allow:

- 50% of 14 and 15 year-olds worked after 7:00 PM at least one school night per week
- 20% of 16 and 17 year-olds worked after 10:00 PM at least one school night per week

Job titles do not necessarily reflect tasks teens do and hazards to which they may be exposed:

- 6% had the title "cleaner" though 50% had cleaned
- 6% had the title "shelf stocker" though 43% had stocked shelves
- 6% had the title "cook" though 18% had cooked

Some teens were injured on the job:

- 10% had been hurt seriously enough to seek medical care

What can you do to prevent teen injuries?

Employers

- Comply with child labor laws and occupational health and safety regulations that apply to your business.
- Assess and eliminate hazards for teen workers.
- Train teen workers to use safe work practices, recognize hazards, prepare for emergencies.
- Assure that teen workers are appropriately supervised.

Parents

- Take an active role in the employment decisions of your teens.
- Discuss the types of work involved and the training and supervision provided by the employer.
- Know where you can get information about child labor laws.

Educators

- Know federal and state child labor laws.
- Discuss health hazards in the workplace and students' rights and responsibilities as workers.
- Ensure that school-based work experience programs provide safe and healthful environments.

Teens

- Know your rights to a safe and healthful workplace.
- Learn to recognize hazards at work and speak up when you see them.
- Participate in training programs at work or request training if none is offered.
- Use safe work practices.
- Learn where you can get information about child labor laws, health and safety, and your rights.

Health Care Providers

- Recognize that working issues may be relevant to the health of your adolescent patients.
- Consider disseminating materials about work to your patients. (See p. 8 for a list of materials.)
- Know the child labor laws, if signing off on work permits.
- Establish if injuries are work-related.
- Comply with the reporting law (105 CMR 300) by reporting work-related injuries to teens to the Massachusetts Department of Public Health.

(Adapted from NIOSH Alert 95-125)

Resources

For questions about wages or child labor laws, call:

Office of the Massachusetts Attorney General, Fair Labor and Business Practices Division
617/727-3465

U.S. Department of Labor, Wage and Hour Division
617/565-2066

For questions about discrimination at work, call:

Massachusetts Commission Against Discrimination (MCAD)
617/727-3990

U.S. Department of Commerce, Equal Employment Opportunity Commission (EEOC)
617/565-3200 or 800/669-4000

For questions about workers' compensation, call:

Massachusetts Department of Industrial Accidents
617/727-4900, ext. 470 or 800/323-3249, ext. 470

For questions about workplace health and safety, call:

U.S. Department of Labor, Occupational Safety and Health Administration (OSHA)
617/545-9860

Massachusetts Department of Labor and Workforce Development, Occupational Hygiene Program
617/969-7177

Massachusetts Coalition for Occupational Safety and Health (MassCOSH)
617/624-6686
(Western MassCOSH **413/731-0760**)

Massachusetts Department of Public Health, *Teens at Work*: Injury Surveillance *and Prevention Project*
617/624-5638

Child Labor Laws

Massachusetts and federal child labor laws apply to youth under age 18 and their employers. The laws (1) require that youth under 18 obtain work permits or educational certificates; (2) limit the hours young people can work; and (3) specify the kinds of jobs they are permitted to do.

Legal Work Hours for Teens

14- and 15-Year-Olds	16- and 17-Year-Olds
Permissible Work Hours	**Permissible Work Hours**
Between 7 AM and 7 PM during the school year	Not before 6 AM or after 10 PM (except in restaurants until midnight on Fridays, Saturdays, and during school vacation)
Not during school hours	
Between 7 AM and 9 PM during the summer	

Maximum Hours When School is In Session	Maximum Hours When School is In Session
18 hours/week	48 hours/week
3 hours/day on school days	9 hours/day
8 hours/day Saturdays, Sundays, holidays	6 days/week
6 days/week	

Maximum Hours When School is Not In Session	Maximum Hours When School is Not In Session
40 hours/week	48 hours/week
8 hours/day	9 hours/day
6 days/week	6 days/week

Work Permits

Youth under 18 must get a permit each time they work in a new place. In Massachusetts, 14- and 15-year-olds get *work permits*; 16- and 17-year-olds get *educational certificates*. These permits are usually obtained from the school department in the city or town where the teen lives.

Prohibited Tasks for Teens

Under state and federal child labor laws, teens are precluded from doing certain hazardous tasks. For example, no one under 18-years-old may do work that involves: using meat slicers or power-driven bakery machines; working 30 feet or more above ground or water; using circular or band saws, guillotine shears, or box crushers; or driving a vehicle or forklift (except on a farm). No one under 16-years-old may do work that involves: working in a factory; working in freezers or meat coolers; cooking (except at lunch counters, soda fountains, or snack bars); or working on ladders or scaffolds. With a few exceptions such as newspaper carriers, farmworkers, and entertainers, youth under 14 years old are precluded from holding jobs.

For a complete list of hazardous occupations for teens prohibited by child labor laws, call the Office of the Massachusetts Attorney General or the U.S. Department of Labor, Wage and Hour Division at the numbers listed on p. 5 of this newsletter.

Moves Under Way to Update Child Labor Laws

The current laws were created approximately 50 years ago. Times have changed. The economy and technology have changed as have the work and educational practices of teens. In order to strike a modern balance between school and work for today's teens, proposed amendments to the state child labor laws are under consideration by the Massachusetts state legislature.

Worksite Interventions

Teens at Work seeks to actively link its surveillance activities with prevention. During an interview with an injured teen, if information arises indicating that other workers, particularly teens, are at risk of injury or that there have been potentially serious violations of child labor laws or the occupational safety and health act, *Teens at Work* considers referring that employer to another state or federal agency for worksite follow-up. This option is discussed with the teen. Since the project began in 1992, approximately 80 referrals have been made to the Office of the Massachusetts Attorney General (responsible for enforcing state child labor laws), to the Occupational Safety and Health Administration (OSHA), or the Wage and Hour Division of the U.S. Department of Labor. An example of one such referral leading to hazard abatement follows.

A 17-year-old printing press operator's hand was seriously crushed when he inadvertently hit the "on" button while cleaning the press. The teen had never received safety instruction from his employer. Furthermore, the safety guard had been removed from the press. OSHA telephoned the company for consultation about the circumstances surrounding the injury.

As a result, the company hired a health and safety consultant who (1) conducted a site inspection; (2) developed a hazard communication plan; (3) reviewed the company's safety guarding protocols; and (4) conducted employee training. Additionally, the company purchased and installed "lock-out/tag-out" equipment to prevent the generation of electricity to hard-wired machinery during maintenance.

Teens at Work: Injury Surveillance and Prevention Project is a project of the Occupational Health Surveillance Program of the Massachusetts Department of Public Health. *Teens at Work* is funded by a grant from the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC).

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Attention Health Care Providers!

Work-Related Injuries to Persons Less than 18 Years of Age are Reportable to MDPH!

Case reporting provides an important opportunity for physicians to contribute to primary prevention activities. (See above.) Physicians must report serious injuries (and may report other injuries) within ten days of diagnosis. Hospitals must report all work-related injuries to persons less than 18 at least semi-annually. (105CMR.300)

A serious work-related injury is defined as an injury resulting in death, hospitalization, or in the judgment of the treating physician, results in, or will result in:

A. Significant scarring or disfigurement; OR
B. Permanent disability; OR
C. Protracted loss of consciousness; OR
D. Loss of a body part or bodily function; OR
E. Is less significant but similar to injuries sustained by other employees at the same worksite.

To Report

By phone: call (617) 624-5632.
By mail: send reporting form to MDPH at the address listed on the front of this newsletter.
By FAX: fax reporting form to (617) 624-5696.
For more information about reporting, to request reporting forms, or discuss computer-generated reporting: call (617) 624-5638.

Materials from MDPH

Safe Work/Safe Workers: A Guide for Teaching High School Students About Occupational Health and Safety (1997)
3-hour curriculum containing short video and learning activities. ($35.00)

Protecting Working Teens: A Public Health Resource Guide (1995)
An overview of the problem and resources for prevention. ($8.00)

Protecting Your Working Teen: A Guide for Parents (1996)
Pamphlet containing child labor laws and related information.

Do You Work? Protect Your Health, Know Your Rights (1998)
Pamphlet for teens containing child labor laws and related information.

Know Your Rights (1996)
Poster for teens with information about wages, hours, health and safety.

Protecting Working Teens: A Guide for Health Care Providers (1998)
Pamphlet for providers containing child labor laws and related information.

Profile of Brockton Working Teens (1997)
Report of results from Brockton student survey.

FACE Facts: Fatality Investigation of Deaths of Two Massachusetts News Carriers (1995)
Report from Fatality Assessment and Control Evaluation Project.

"Work-Related Injuries to Massachusetts Teens, 1987-1990" (1996)
Article reprint from *American Journal of Industrial Medicine.*

"Work-Related Injuries Among Massachusetts Children: A Study Based on Emergency Department Data" (1993)
Article reprint from *American Journal of Industrial Medicine.*

Call 617-624-5638 for more information.

Teens at Work
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